Can Financial Development Cause Productive Inefficiency?

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1) The **question** is: what is the relationship between financial development and overall productive inefficiency.

2) **Hypothesis**: higher productivity in banking sector results in easier crediting conditions and companies loose incentive to stay efficient.

3) I suggest **use TFP change in banking sector as the measure of financial development**.

4) Sample of 16 OECD countries over 1990 – 2007 (due to availability of data for TFP estimation in banking sector).

5) **TFP change is measured** by Malmquist index. Estimated using DEA (software used: DEAP by T. J. Coelli). One output (total credit) and three inputs (employment, fixed capital, and total deposits).

6) **Inefficiency effects** modeled as Battese and Ceolli (1995) specification (software used: Frontier V.4.1. by T. J. Coelli)

Production function equation

Intercept	1.71***
Labor (a)	0.97***
Capital (b-1)	-0.96***
Time trend	0.01*

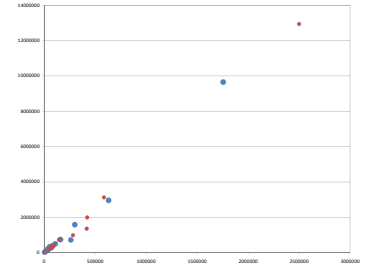
Inefficiency equation

Intecept	-1.57***
Malm	0.66***
Malm -1	0.75***

Log-likelihood function = 124.70

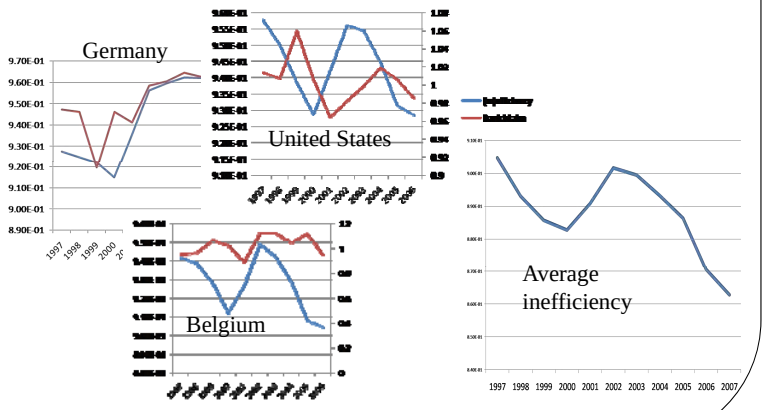
CRS

No tech. change



Positive relationship

Decrease in avg. inefficiency



Battese and Coelli (1995) specification

$$\ln y_{it} = \alpha_0 + \alpha_1 \ln K_{it} + \alpha_2 \ln L_{it} + \alpha_3 t + v_{it} - u_{it}$$

$$u_{it} = \delta_0 + \delta_1 Malm_{it} + \delta_2 Malm_{it-1} + \varepsilon_{it}$$

where y_{it} is per capita GDP and K_{it} is fixed capital, expressed in 2005 U.S. dollars. L_{it} is total employment.

v_{it} ~iid $N(0,\sigma_v^2)$ is noise and u_{it} ~ iid $|N(0,\sigma_u^2)|$ is a measure of (in)efficiency

Countries: Austria, Belgium, Denmark, Finland, Germany, Ireland, Italy, Korea, Luxembourg, Netherlands, Norway, Poland, Spain, Sweden, Switzerland, United States